

[Handwritten:] B6
B2

<120> Mammalian selenoprotein differentially expressed in
tumor\cells

<140>

<141>

<150> 60/080,850

<151> 1998-04-06

<150> PCT/US99/07560

<151> 1999-04-06

<160> 15

<170> PatentIn Ver. 2.0

<210> 1

<211> 162

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (93)

<223> Xaa represents selenocysteine

<400> 1

Met Ala Ala Gly Pro Ser Gly Cys / Leu Val Pro Ala Phe Gly Lys Arg
1 5 10 15

Leu Leu Leu Ala Thr Val Leu Gln Ala Val Ser Ala Phe Gly Ala Glu
20 25 30

Phe Ser Ser Glu Ala Cys Arg Glu Leu / Gly Phe Ser Ser Asn Leu Leu
35 40 45

Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe Asn Leu Leu Gln Leu Asp
50 55 60

Pro Asp Cys Arg Gly Cys Cys Gln Glu Glu Ala Gln Phe Glu Thr Lys
65 70 75 80

Lys Leu Tyr Ala Gly Ala Ile Leu Glu Val Cys / Gly Xaa Lys Leu Gly
85 90 95

Arg Phe Pro Gln Val Gln Ala Phe Val Arg Ser Asp Lys Pro Lys Leu
100 105 110

Phe Arg Gly Leu Gln Ile Lys Tyr Val Arg Gly Ser Asp Pro Val Leu
115 120 125

Lys Leu Leu Asp Asp Asn Gly Asn Ile Ala Glu Glu Leu Ser Ile Leu
130 135 140

Lys Trp Asn Thr Asp Ser Val Glu Glu Phe Leu Ser Glu Lys Leu Glu

145

150

155

160

Arg Ile

<210> 2

<211> 1244

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (5)..(493)

<220>

<221> misc_feature

<222> (281)..(283)

<223> TGA codon codes for selenocysteine, Xaa

<400> 2

agcg atg gcg gct ggg ccg agt ggg tgt ctg gtg ccg gcg ttt ggg cta 49

Met Ala Ala Gly Pro Ser Gly Cys Leu Val Pro Ala Phe Gly Leu

1

5

10

15

cgg ttg ttg ttg gcg act gtg ctt caa gcg gtg tct gct ttt ggg gca 97

Arg Leu Leu Leu Ala Thr Val Leu Gln Ala Val Ser Ala Phe Gly Ala

20

25

30

gag ttt tca tgc gag gca tgc aga gag tta ggc ttt tct agc aac ttg 145

Glu Phe Ser Ser Glu Ala Cys Arg Glu Leu Gly Phe Ser Ser Asn Leu

35

40

45

ctt tgc agc tct tgt gat ctt ctc gga cag ttc aac ctg ctt cag ctg 193

Leu Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe Asn Leu Leu Gln Leu

50

55

60

gat cct gat tgc aga gga tgc tgt cag gag gaa gca caa ttt gaa acc 241

Asp Pro Asp Cys Arg Gly Cys Cys Gln Glu Glu Ala Gln Phe Glu Thr

65

70

75

aaa aag ctg tat gca gga gct att ctt gaa gtt tgt gga tga aaa ttg 289

Lys Lys Leu Tyr Ala Gly Ala Ile Leu Glu Val Cys Gly Xaa Lys Leu

80

85

90

95

gga agg ttc cct caa gtc caa gct ttt gtt agg agt gat aaa ccc aaa 337

Gly Arg Phe Pro Gln Val Gln Ala Phe Val Arg Ser Asp Lys Pro Lys

100

105

110

ctg ttc aga gga ctg caa atc aag tat gtc cgt ggt tca gac cct gta 385

Leu Phe Arg Gly Leu Gln Ile Lys Tyr Val Arg Gly Ser Asp Pro Val

115

120

125

tta aag ctt ttg gac gac aat ggg aac att gct gaa gaa ctg agc att 433

Leu Lys Leu Leu Asp Asp Asn Gly Asn Ile Ala Glu Glu Leu Ser Ile

130

135

140

ctc aaa tgg aac aca gac agt gta gaa gaa ttc ctg agt gaa aag ttg 481

Leu Lys Trp Asn Thr Asp Ser Val Glu Glu Phe Leu Ser Glu Lys Leu

145

150

155

gaa cgc ata taa atcttgctta aattttgtcc tatecttttg ttaccttate 533
 Glu Arg Ile
 160

aaatgaaata ttacagcacc tagaaaataa tttagttttg cttgcttcca ttgatcagtc 593
 ttttacttga ggcattaaat atctaattaa atcgtgaaat ggcagtatag tccatgatat 653
 ctaaggagtt ggaagctta acaaaaccca ttttttataa atgtccatcc tcttgcattt 713
 gttgatacca ctaacaaaat gctttgtaac agacttgagg ttaattatgc aaatgatagt 773
 ttgtgataat tgggtcagtt ttacgaacaa cagatttcta aattagagag gttaacaaga 833
 cagatgatta ctatgcctca tgtgctgtgt gctctttgaa aggaatgaca gcagactaca 893
 aagcaaataa gatatactga gcctcaacag attgcctgct cctcagagtc tctcctattt 953
 ttgtattacc cagctttctt ttttaatacaa atgttattta tagtttataa tgaatgcact 1013
 gcataaaaaac tttgtagctt cattattgta aaacatattc aagatcctac agtaagagtg 1073
 aaacattcac aaagatttgc gttaatgaag actacacaga aaacctttct agggatttgt 1133
 gtggatcaga tacatacttg gcaaattttt gagttttaca ttcttacaga aaagtccatt 1193
 taaaagtgat catttgtaag accaaaatat aaataaaaag tttcaaaaat c 1244

<210> 3
 <211> 489
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(489)

<220>
 <221> misc_feature
 <222> (277)..(279)
 <223> TGA codon codes for Selenocysteine, Xaa

<400> 3
 atg gcg gct ggg ccg agt ggg tgt ctg gtg ccg gcg ttt ggg cta cgg 48
 Met Ala Ala Gly Pro Ser Gly Cys Leu Val Pro Ala Phe Gly Leu Arg
 1 5 10 15
 ttg ttg ttg gcg act gtg ctt caa gcg gtg tct gct ttt ggg gca gag 96
 Leu Leu Leu Ala Thr Val Leu Gln Ala Val Ser Ala Phe Gly Ala Glu
 20 25 30
 ttt tca tgc gag gca tgc aga gag tta ggc ttt tct agc aac ttg ctt 144
 Phe Ser Ser Glu Ala Cys Arg Glu Leu Gly Phe Ser Ser Asn Leu Leu
 35 40 45
 tgc agc tct tgt gat ctt ctc gga cag ttc aac ctg ctt cag ctg gat 192
 Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe Asn Leu Leu Gln Leu Asp
 50 55 60
 cct gat tgc aga gga tgc tgt cag gag gaa gca caa ttt gaa acc aaa 240

Pro	Asp	Cys	Arg	Gly	Cys	Cys	Gln	Glu	Glu	Ala	Gln	Phe	Glu	Thr	Lys	
65					70					75					80	
aag	ctg	tat	gca	gga	gct	att	ctt	gaa	gtt	tgt	gga	tga	aaa	ttg	gga	288
Lys	Leu	Tyr	Ala	Gly	Ala	Ile	Leu	Glu	Val	Cys	Gly	Xaa	Lys	Leu	Gly	
				85					90					95		
agg	ttc	cct	caa	gtc	caa	gct	ttt	gtt	agg	agt	gat	aaa	ccc	aaa	ctg	336
Arg	Phe	Pro	Gln	Val	Gln	Ala	Phe	Val	Arg	Ser	Asp	Lys	Pro	Lys	Leu	
			100					105					110			
ttc	aga	gga	ctg	caa	atc	aag	tat	gtc	cgt	ggg	tca	gac	cct	gta	tta	384
Phe	Arg	Gly	Leu	Gln	Ile	Lys	Tyr	Val	Arg	Gly	Ser	Asp	Pro	Val	Leu	
		115					120					125				
aag	ctt	ttg	gac	gac	aat	ggg	aac	att	gct	gaa	gaa	ctg	agc	att	ctc	432
Lys	Leu	Leu	Asp	Asp	Asn	Gly	Asn	Ile	Ala	Glu	Glu	Leu	Ser	Ile	Leu	
	130				135					140						
aaa	tgg	aac	aca	gac	agt	gta	gaa	gaa	ttc	ctg	agt	gaa	aag	ttg	gaa	480
Lys	Trp	Asn	Thr	Asp	Ser	Val	Glu	Glu	Phe	Leu	Ser	Glu	Lys	Leu	Glu	
	145				150				155					160		
cgc	ata	taa														489
Arg	Ile															

<210> 4
 <211> 136
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (67)
 <223> Xaa is selenocysteine

<400> 4
 Ser Ala Phe Gly Ala Glu Phe Ser Ser Glu Ala Cys Arg Glu Leu Gly
 1 5 10 15
 Phe Ser Ser Asn Leu Leu Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe
 20 25 30
 Asn Leu Leu Gln Leu Asp Pro Asp Cys Arg Gly Cys Cys Gln Glu Glu
 35 40 45
 Ala Gln Phe Glu Thr Lys Lys Leu Tyr Ala Gly Ala Ile Leu Glu Val
 50 55 60
 Cys Gly Xaa Lys Leu Gly Arg Phe Pro Gln Val Gln Ala Phe Val Arg
 65 70 75 80
 Ser Asp Lys Pro Lys Leu Phe Arg Gly Leu Gln Ile Lys Tyr Val Arg
 85 90 95
 Gly Ser Asp Pro Val Leu Lys Leu Leu Asp Asp Asn Gly Asn Ile Ala
 100 105 110
 Glu Glu Leu Ser Ile Leu Lys Trp Asn Thr Asp Ser Val Glu Glu Phe
 115 120 125

Leu Ser Glu Lys Leu Glu Arg Ile
130 135

<210> 5
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 5
atggcggctg ggccgagtgg g 21

<210> 6
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 6
taatatgcgt tccaactttt c 21

<210> 7
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 7
tctgcttttg gggcagagtt t 21

<210> 8
<211> 1216
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (11)..(490)

<220>
<221> misc_feature
<222> (287)..(289)
<223> TGA codon codes for Selenocysteine, Xaa

<400> 8
gaccgcaggg atg gcg gca ggg cag ggt ggg tgg ctg cgg cca gct ctg 49
Met Ala Ala Gly Gln Gly Gly Trp Leu Arg Pro Ala Leu
1 5 10

ggg ctg cgc ttg ctg ctg gcg act gcg ttt caa gcg gtg tct gct ctg 97

Gly	Leu	Arg	Leu	Leu	Leu	Ala	Thr	Ala	Phe	Gln	Ala	Val	Ser	Ala	Leu	
15						20					25					
ggg	gaa	gag	ttt	gcg	tca	gag	gca	tgc	aga	gag	ttg	ggt	ttc	tcc	agc	145
Gly	Ala	Glu	Phe	Ala	Ser	Glu	Ala	Cys	Arg	Glu	Leu	Gly	Phe	Ser	Ser	
30					35				40					45		
aac	ttg	ctc	tgc	agc	tct	tgc	gat	ctt	ctt	gga	cag	ttt	aat	ctg	ctc	193
Asn	Leu	Leu	Cys	Ser	Ser	Cys	Asp	Leu	Leu	Gly	Gln	Phe	Asn	Leu	Leu	
			50					55					60			
cca	ctg	gac	cct	gtt	tgc	aga	ggg	tgc	tgt	cag	gaa	gaa	gca	caa	ttt	241
Pro	Leu	Asp	Pro	Val	Cys	Arg	Gly	Cys	Cys	Gln	Glu	Glu	Ala	Gln	Phe	
			65				70						75			
gaa	acc	aaa	aag	ctg	tat	gca	gga	gcc	atc	ctt	gaa	gtc	tgc	gga	tga	289
Glu	Thr	Lys	Lys	Leu	Tyr	Ala	Gly	Ala	Ile	Leu	Glu	Val	Cys	Gly	Xaa	
		80					85					90				
aaa	ttg	ggg	agg	ttc	cct	caa	gtc	caa	gct	ttt	gtc	aga	agt	gat	aaa	337
Lys	Leu	Gly	Arg	Phe	Pro	Gln	Val	Gln	Ala	Phe	Val	Arg	Ser	Asp	Lys	
	95				100						105					
ccc	aaa	ctc	ttc	aga	ggg	cta	cag	atc	aag	tat	gtt	cga	ggc	tca	gac	385
Pro	Lys	Leu	Phe	Arg	Gly	Leu	Gln	Ile	Lys	Tyr	Val	Arg	Gly	Ser	Asp	
110					115				120					125		
cct	gta	cta	aag	ctt	ttg	gac	gac	aac	ggg	aac	att	gct	gaa	gaa	cta	433
Pro	Val	Leu	Lys	Leu	Leu	Asp	Asp	Asn	Gly	Asn	Ile	Ala	Glu	Glu	Leu	
			130					135					140			
agc	atc	ctc	aaa	tgg	aac	aca	gac	agt	gtg	gaa	gag	ttc	ctg	agc	gag	481
Ser	Ile	Leu	Lys	Trp	Asn	Thr	Asp	Ser	Val	Glu	Glu	Phe	Leu	Ser	Glu	
			145					150					155			
aag	ttg	gaa	cgcatataaa	catgcttagt	agtttttata	ctaatcaaat										530
Lys	Leu	Glu														
		160														
gaattatcac	agcacctaga	caataactta	gttttgcattg	cttacattgg	tcattcctttt											590
tatgtacatc	attaatcttc	tgacaagaag	ctgaagtagc	accacagtcc	ataatatatc											650
aggatctggc	aagcttaagg	aaccagctc	ttagaaattt	ctcttcttct	acatttggtg											710
ctctcaccag	tgaaacgctt	tgtaaggagg	catctgggta	attatgcaa	taagtttggtg											770
ataattgctc	cagttctaca	aacaacagaa	ttttaaatag	aggaagtggg	taaaggagac											830
acctcccttg	ctgtgtgctc	tttgaaagta	attgacagaa	aactacaaac	acgtaggatg											890
cctgcgcct	cagcagcacc	cacccagag	cctcttggcg	tgcccagctt	tcttttcagt											950
acaagtattt	gtagtttgta	atgaatgtgc	cacatacagg	ttttgtagct	tattattatg											1010
gaacagactg	aagatctgca	gtacgaatgt	aatacttata	aaggtttgca	ttaatgagga											1070
ttacacagaa	aacctttgtt	aaggacttgt	gtagatctga	taattggcaa	atttttattt											1130
taaaagtatt	cttacagaag	agttccattt	aagaatgttc	acttatagga	ccaaaatata											1190

aataaaaact ttcaaataatg aaaaaa

1216

<210> 9
<211> 162
<212> PRT
<213> Mus musculus

<220>
<221> SITE
<222> (93)
<223> Xaa represents selenocysteine

<400> 9
Met Ala Ala Gly Gln Gly Gly Trp Leu Arg Pro Ala Leu Gly Leu Arg
1 5 10 15
Leu Leu Leu Ala Thr Ala Phe Gln Ala Val Ser Ala Leu Gly Ala Glu
20 25 30
Phe Ala Ser Glu Ala Cys Arg Glu Leu Gly Phe Ser Ser Asn Leu Leu
35 40 45
Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe Asn Leu Leu Pro Leu Asp
50 55 60
Pro Val Cys Arg Gly Cys Cys Gln Glu Glu Ala Gln Phe Glu Thr Lys
65 70 75 80
Lys Leu Tyr Ala Gly Ala Ile Leu Glu Val Cys Gly Xaa Lys Leu Gly
85 90 95
Arg Phe Pro Gln Val Gln Ala Phe Val Arg Ser Asp Lys Pro Lys Leu
100 105 110
Phe Arg Gly Leu Gln Ile Lys Tyr Val Arg Gly Ser Asp Pro Val Leu
115 120 125
Lys Leu Leu Asp Asp Asn Gly Asn Ile Ala Glu Glu Leu Ser Ile Leu
130 135 140
Lys Trp Asn Thr Asp Ser Val Glu Glu Phe Leu Ser Glu Lys Leu Glu
145 150 155 160
Arg Ile

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 10
atggcggcag ggcaggggtg

<210> 11

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 11
tatgcgttcc aacttctcgc t

21

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 12
cagacttgcg gttaattatg

20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 13
gccaaagtatg tatctgatcc

20

<210> 14
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 14
ggcatagtaa tcatctgtct tggt

24

<210> 15
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer

<400> 15
gtatgtatct gatccacaca aatcc

25